

Heavy Duty incremental encoder

- ▶ Extremely robust housing for harsh environments
- ▶ 6 or 3 short-circuit protected outputs
1, 1̄, 2, 2̄, 0, 0̄ / 1, 2, 0
- ▶ IP 66, encapsulation class
- ▶ Electrically insulated hollow-shaft
- ▶ 5 Vdc or 9...30 Vdc
- ▶ Available with Advanced internal diagnostics, ADS



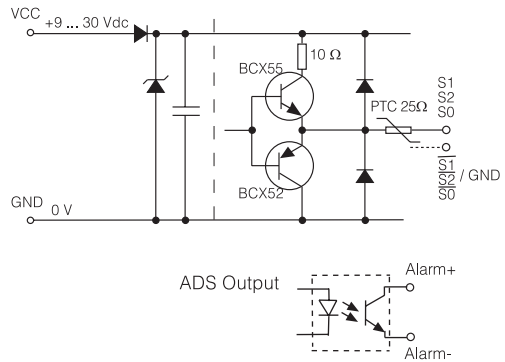
ELECTRICAL SPECIFICATION

Supply voltage +EV	9-30V	5V ± 10%
	Polarity protected	---
Current consumption at no load	60mA @ 24V Max 80mA	85mA Max 155mA
Line counts	500, 1000, 1024, 2048, 2500, 3072, 3600, 4096, 5000, 6350, 8192, 10000	
Measuring steps	4 x Line counts	
Accuracy	1-5000ppr	5001-10000ppr
Dividing error	± 50° el	± 90° el
Channel separation	90° ± 25° el	90° ± 45° el
Outputs	High current HTL	RS-422
	Short circuit protected	
Load max	± 40mA	± 20mA
Max cable length	350m @ 100kHz	1km (TIA/EIA-422-B)
U _{high} (at 40mA load)	> +EV - 4,0V	> 3,0V
U _{low} (at 40mA load)	< 2,5V	< 1,15V
Frequency range	0...100kHz	0...200kHz
Option	Advanced Diagnostic System ADS	
Alarm output	Opto-coupler	
OK	Closed-circuit	V _{CE} < 2V at 10mA
Error	Open-circuit	min 500ms
Voltage max	35V	
Current max	30mA	
PC communication	RS-232	Max 10m cable

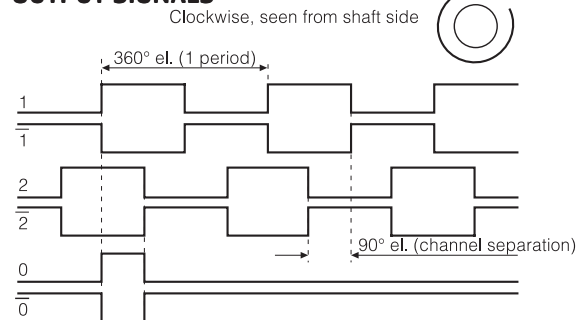
ACCESSORIES

Torque arm	
M5	Part. No. 01208013
M6	Part. No. 01208014
ADS PC software kit	Part. No. 01209084

OUTPUT CIRCUIT



OUTPUT SIGNALS

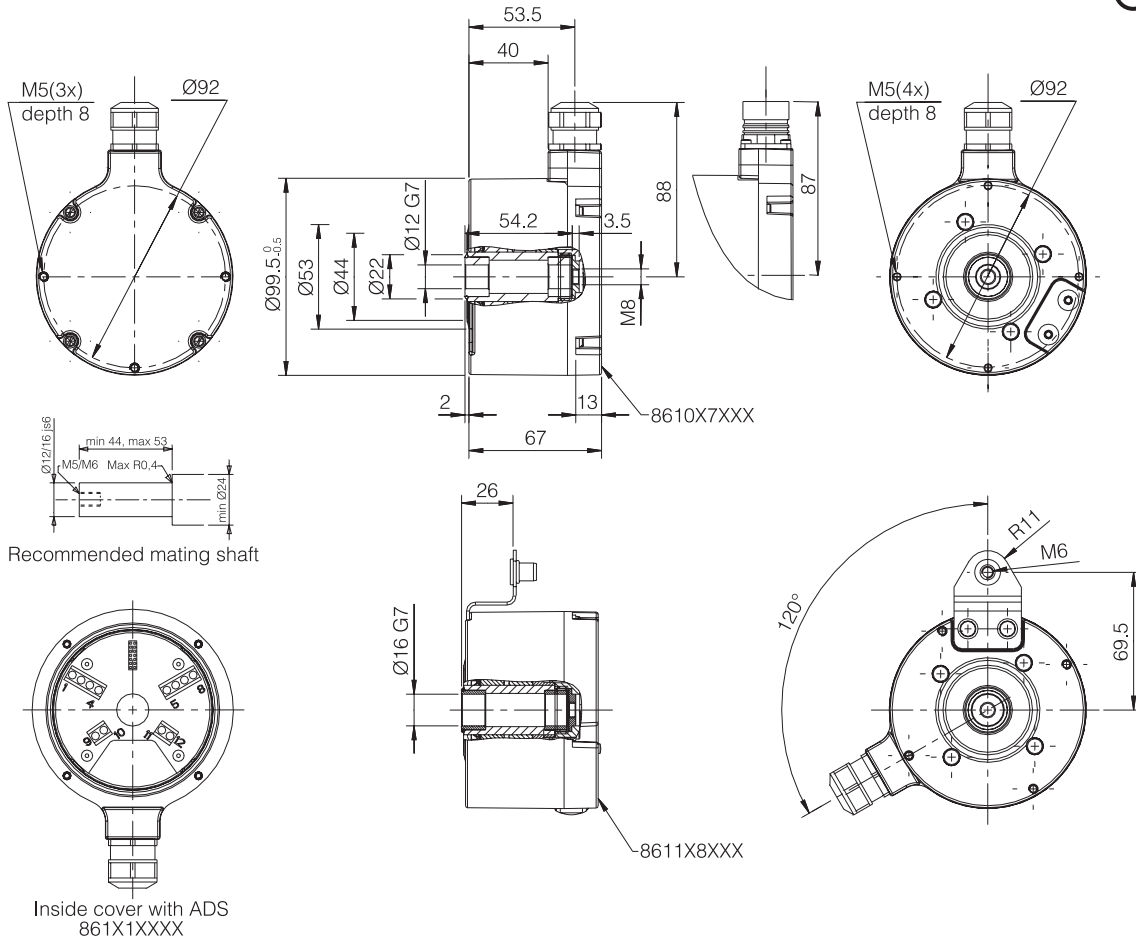


CONNECTION

Function	Terminal	12 pin EML	Colour
+ E Volt	1	12	Red
0 Volt	2	10	Blue
0	3	3	Brown
0̄ (0 Volt *)	4	4	Violet
1	5	8	Green
1̄ (0 Volt *)	6	1	White
2	7	5	Yellow
2̄ (0 Volt *)	8	6	Black
Alarm +	9	9	Grey
Alarm -	10	11	Pink
RXD	11	7	Grey / Pink
TXD	12	2	Red / Blue
Case			Shield

* 3 channel output
All 0 Volt pins are internally connected on the PCB

ADS outputs



Recommended mating shaft

Inside cover with ADS
861X1XXXX

MECHANICAL SPECIFICATION

Isolated Hollow-shaft	Ø12, 16mm, Stainless steel / PEEK
Moment of inertia	55 x 10 ⁻⁶ kgm ²
Load max	
Radial	300N
Axial	100N
Speed max	4000 rpm
Code disc	Extended temp
Temperature	
Operating	-20°C ... +80°C
Storage	-25°C ... +80°C (+105°C max 1h)
Housing	Aluminum, coated
Weight	Approx. 1300g
Protection class	IP 66 according to IEC 60529
Vibration	<100m/s ² (50...2000 Hz)
Shock	<1000m/s ² (11ms)
Cable	10x0,25mm ² twisted pair PVC (Not ADS)
Connector	12 pin EML

ORDERING INFORMATION

8 6 1 - [] - []

Option

Mechanical
0 = Standard
1 = Torque bracket
(for M6 torque arm)

Electrical

0 = Standard
1 = ADS (1024, 2048 and 4096 ppr)

Hollow-shaft

7 = Ø 12 mm
8 = Ø 16 mm

Connection

1 = Connector, radial 12 pin EML CW
2 = Connector, radial 12 pin EML CCW
3 = Cable, radial 1.5 m
4 = M20 cable gland, radial Ø8-11mm
5 = M20 cable gland, radial Ø11-14mm
9 = Cable, radial xx m

Supply voltage

1 = 5 Vdc (Only 6 channel output, not available with ADS)
5 = 9...30 Vdc
7 = 9...30 Vdc (RS-422 output, only 6 channel output, not available with ADS)

Outputs

5 = 3 channels 1, 2, 0
6 = 6 channels 1, 1̄, 2, 2̄, 0, 0̄

Line counts

500, 1000, 1024, 2048, 2500, 3072, 3600, 4096, 5000
6350, 8192, 10000 ppr (Other line counts on request)

LEINE LINDE ISO 9001 / ISO 14001 certified

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08-04-09 PS. Specifications can be changed without prior notice.

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